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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,151	02/13/2004	Takatoshi Nishizawa	Q79502	4040
23373	7590	03/23/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			KRUER, KEVIN R	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary

Application No.

10/777,151

Applicant(s)

NISHIZAWA ET AL.

Examiner

Kevin R Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. This application is a continuation of PCT/JP02/08259 filed 08/13/2002, which claims priority to Japanese Patent Application 2001-246893-filed August 16, 2001.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-5 and 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuhmann et al (US 5,851,640) in view of Ueda (EP 0613919 A1) and Beck et al (US 5,214,024).

Schuhmann teaches a transparent, biaxially oriented multi-layer polypropylene film comprising a core layer and at least one top layer on one or more sides of the core (abstract). The core preferably comprises a polypropylene resin and calcium carbonate particles (col 3, lines 34+). The core may further comprise antistatic agents (col 9, lines 15+). Herein, the core is understood to read on the claimed "intermediate layer." The top layers also comprise polypropylene and an antistatic agent (col 9, lines 15+) and are herein understood to read on the claimed "printing layer." The top layers may be

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subjected to corona treatment (herein understood to read on the claimed "activation treatments") in order to improve the film's ink adhesion (col 11, lines 14+). Said ink is herein understood to read on the claimed "pigment coating layer" of claim 15.

Schuhmann teaches that the multi-layer film may comprise an antistatic agent, but does not teach that the antistatic should comprises the claimed "non-transfer antistatic agent." However, Ueda teaches an antistatic which may be utilized in a polypropylene composition (page 9, lines 34-42). The anti-static composition taught in Ueda comprises the following:

- | | |
|-------------|--|
| Component A | a polyolefin resin (55-95wt%) |
| Component B | a polyetheresteramide antistatic agent (3-40wt%) |
| Component C | a polyamide resin (1-20wt%) and |
| Component D | a compatilizer (0.02-20wt%) |

The antistatic agent further comprises at least 0.01wt% of an alkali metal halide (page 4, lines 25+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the polyetheresteramide antistatic agent (in the taught amounts) taught in Ueda as the anti-static agent taught in Schuhmann. The motivation for doing so would have been Ueda teaches that polyetheresteramide anti-static agent is compatible with propylene, has a high heat resistance, permanently retains its anti-static properties, and does not rinse away in the presence of water.

Ueda further teaches that the polyamide of component C increases the surface orientation of the polyetheresteramide anti-static agent (page 6, lines 38-47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to add the polyamide taught in Ueda (in the taught amounts) to the layers of the film taught in Schuhmann. The motivation for doing so would have been because Ueda teaches that polyamides (in the taught amounts) increase the surface orientation of the antistatic agent.

Ueda also teaches that a compatilizer is preferably utilized in order to improve compatibility with the resin, prevent interlaminar peeling of molded articles obtained, and improve the mechanical strength and appearance of the final product (page 6, lines 55-61). When polypropylene is utilized as the thermoplastic resin, preferred compatilizers include modified low molecular weight polyolefins (page 7, lines 21-29) and ionomer (page 6, lines 20+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add one of said compatilizers (in the taught amounts) to the layers of the multi-layer film taught in Schuhmann. The motivation for doing so would have been to prevent interlaminar peeling and improve compatibility between the polypropylene and the anti-static agent.

Schuhmann also does not teach that the antistatic agent should be excluded from the surface layers and concentrated in the core layer. However, Beck teaches a thermoplastic film comprising an antistatic agent. Beck teaches that it is desirable that a thermoplastic film has a surface resistivity of less than $1 \times 10^{13} \Omega/\text{square}$ in order to avoid charge build up (col 2, lines 9+) but that the addition of an antistatic agent to a surface layer can deteriorate desirable properties of said layer (col 2, lines 20+). To avoid the deterioration of the desired surface film properties, Beck teaches that the antistatic agent may be added to the film layer below the surface layer without loss of the desired

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surface resistance (col 3, lines 7+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to exclude antistatic agent from the surface of the film taught in Schuhmann and concentrate said antistatic agent in the underlaying film. The motivation for doing so would have been to avoid deterioration of the surface film properties while maintaining the desired surface resistivity.

With respect to claim 3, neither Schuhmann nor Ueda teaches the claimed surface resistivity. However, Beck teaches that it is desirable for a thermoplastic film to have a surface resistivity of less than $1 \times 10^{13} \Omega/\text{square}$ so that the film will not build up charge (col 2, lines 9+). Furthermore, Ueda teaches that the surface resistivity of the composition is a result effective variable that is dependent upon the amount of antistatic agent is added to the composition. The courts have held that that it is not inventive to discover the optimum or workable range by routine experimentation when the general conditions of the claimed invention are disclosed in the prior art (See MPEP 2141.05). In the present situation, Ueda teaches that surface resistivity decreases as the amount of antistatic agent is increased. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the amount of antistatic agent added to the core layer of the film taught in Schuhmann in order to obtain a film with a surface resistivity of less than $1 \times 10^{13} \Omega/\text{square}$. The motivation for doing so would have been to optimize the surface resistivity of the laminate so that said film does not build up charge.

With respect to claim 4, Schuhmann does not teach that the printing layer should have the claimed ink adhesion strength. However, Schuhmann does teach that ink

adhesion increases with corona treatment. The courts have held that that it is not inventive to discover the optimum or workable range by routine experimentation when the general conditions of the claimed invention are disclosed in the prior art (See MPEP 2141.05). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the corona treatment conditions of the film taught in Schuhmann. The motivation for doing so would have been to optimize the adhesion of the ink that is applied thereto.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuhmann et al (US 5,851,640) in view of Ueda and Beck et al, as applied to claims 1-5 and 7-20 above, and further in view of Almog et al (US 6,767,588)

Schuhmann in view of Ueda is relied upon as above but does not teach that a coating agent having an ink adhesion properties. However, Almog teaches that adhesion between an ink and a corona treated propylene substrate may be improved by applying a primer layer thereto (col 1, lines 13+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a primer to the corona treated surface layer taught in Schuhmann prior to application of an ink. The motivation for doing so would have been to improve the adhesion between the ink and the substrate.

Response to Arguments

Applicant's arguments filed December 22, 2004 have been fully considered but are moot in view of the new grounds of rejection. In order to expedite prosecution, the

examiner would like to take this opportunity to respond to some of Applicant's arguments that may be relevant to the newly applied rejection.

Applicant argues that the rejection fails to render the claimed film obvious because Schuhmann teaches antistatic agent may be added to the surface layer. The examiner concedes that Schuhmann teaches the antistatic agent may be added to both the core and the surface layers. However, Beck provides motivation to one of ordinary skill in the art to concentrate the antistatic agent in the core layer of Schuhmann.

Applicant further argues that the antistatic agent in Schuhmann is one that bleeds from the interior layer to impart antistatic properties to the surface layer. The examiner concedes that the antistatic agents enumerated in Schuhmann are known in the art to bleed. However, Ueda motivates the use of a non-bleeding antistatic agent in the laminate taught in Schuhmann. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,140,268 teaches adding antistatic layer to a layer below the surface layer of a multi-layer film.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "K-R K", with a horizontal line extending from the end.

Kevin R. Kruer
Patent Examiner-Art Unit 1773